

Amendments to the Specification:

At page 4 of the specification, please replace the paragraph beginning at p. 6 with the following amended paragraph:

The present inventors further determined that reducing or otherwise modifying this previously unrecognized source of inductance for high current and/or pulsed signals, namely, the inductive test loop could improve such measurements. The modification may include modifying or otherwise providing another test signal path from the chuck 20 to the test instrumentation. FIG. 3 shows one embodiment of a probe station 10 with a test loop having a decreased length. Rather than routing the test signal from the chuck 20 through transmission line 22, a transmission line 28 may interconnect the chuck 20 with the suspended guard member 24, which is then electrically connected to the test instrumentation by another transmission line 29. The suspended guard member 24 typically has its guard potential removed when performing this test. Accordingly, the suspended guard member 24 is being used in a non-traditional manner, namely, not interconnected to a guard potential. The interconnection of the transmission line 28 at the chuck 20 may be one of the layers of the chuck 20 such as the top layer 20A of the chuck 20 that defines the surface 20B that supports an electrical device being probed. The at least partially encircling conductive member 33, normally connected to guard potential, may have a height greater than the top surface of the chuck, even with the top surface of the chuck, or below the top surface of the chuck. Preferably, there is an air gap between the conductive member 33 and the chuck 20. The air gap may be partially filled, substantially filled, or completely filled with dielectric material. The signal path to or from the top surface of the chuck may be provided through an opening in the conductive member 33. Electrically connecting the chuck 20 to the suspended guard member 24 by the transmission line 28, and to the test instrumentation by transmission line 29, results in a smaller loop path than that provided by previously existing probe stations, as shown schematically in FIG. 4. By reducing the length of the test path loop, electrical performance is improved, particularly when testing an electrical device using high-current and/or pulsed signals.